

Work Order ID : 89698

Wednesday, September 05, 2012 8:55:23 AM

89698

Page 1

Item ID: 647.0114

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Clip

Stop

NS2

Start Date: 8/30/2012 Start Qty: 20.00

20

Cust Item ID:

Required Date: 9/28/2012 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals: Process Plan:

Date: 12095

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
647.0100	A

110

110

Waterjet

FLOW CNC Waterjet

2024 .063

Memo

1-Cut as per Dwg

Dwg Rev: A

Prog Rev: A

2-Deburr if necessary

120

120

QC

Quality Control

Memo

QC2- Inspect parts off machine FAI/FAIB

SCRAP

0.00
0.00
0.00
0.00
B. OK. 18

20 0 Jm 12-9-16

20 0 Jm 12-9-16

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS							
			Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>						
			Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>						
			Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>						
			Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>							
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector				
Doc/Data													
Equip/Tooling													
Operator													
Material													
Setup													
Other													
Process													
Supplier													
Training													
Unapproved													
FAULT CATEGORY													
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio				<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions		<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled	
												<input type="checkbox"/> Other	

Work Order ID 89698

Wednesday, September 05, 2012 8:55:23 AM

89698

Page 2

Item ID: 647.0114

Accept

N900040100

Setup

Start

NS1

Revision ID:

Stop

NS2

Item Name: Clip

Start Date: 8/30/2012 **Start Qty:** 20.00 ***20***

Cust Item ID:

Required Date: 9/28/2012 **Req'd Qty:** 20.00 ***20***

Customer:

Reference:

Approvals:	Process Plan: _____	Date: _____	Tooling: _____	Date: _____	Run	Start	*NR1*
	QC: _____	Date: _____	SPC (Y/N): _____	Date: _____	Stop		*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 <i>SMB 12.9.14</i>				20			
140 *140* Brake NC Brake NC	Form as per dwg Memo	0.00							
150 *150* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00							

PLB-06-20

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA *[Signature]* Date: *13/6/16*
 QA Closed: *CL* Date: *13/7/16*

Work Order: <u>5091698</u>	DISPOSITION			AGAINST DEPARTMENT/PROCESS				
Part No. <u>644-0114</u>	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>			
NCR No. <u>13-2791</u>	Scrap <input checked="" type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input checked="" type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>			
	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>			
	Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>				

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling	X								
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear	General			
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Ovalized	<input type="checkbox"/> Pressure/Forced	
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Over/Under tolerance	<input type="checkbox"/> Temperature/Cure	
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Part Incorrect	<input type="checkbox"/> Weld	
<input type="checkbox"/> Crushed/Crimped.	<input type="checkbox"/> Burrs	<input type="checkbox"/> Part Lost/Missing	<input type="checkbox"/> Wrong Stock Pulled	
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Part Moved		
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Positioned Wrong		
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Power Loss/Surge		
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes			
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing			
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish			
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio			

Work Order ID 89698***89698***

Page 3

Wednesday, September 05, 2012 8:55:24 AM

Item ID:	647.0114	Accept	*N900040100*	Setup	Start	*NS1*
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Revision ID:

Item Name: Clip

Start Date: 8/30/2012 Start Qty: 20.00 ***20***Required Date: 9/28/2012 Req'd Qty: 20.00 ***20***

Cust Item ID:

Customer:

Reference:

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
	QC:	Date:	SPC (Y/N):	Date:	Stop		*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 *160* Outsource4	Outsource process-Anodize per QSI017 4.1.10.1	0.00							
Outsource process - Anodize	Memo	0.00							
	HARD ANODIZE, COLOR BLACK AS PER DWG.(SEE NOTE 2)								
170 *170* Packaging	Receive & Inspect for Damage & Mat'l Certs	0.00							
Packaging	Memo	0.00							
180 *180* QC	QC5- Inspect part completeness to step on W/O	0.00							
Quality Control	Memo	0.00							

NCR: Yes / No

DQA: Date: .

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Date:

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>				
Part No. _____											
NCR No. _____											
Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear				General							
Bending		Bend		Grain		Ovalized		Pressure/Forced			
Centre Not Concentric to O/S		BOM/Route		Hardware		Over/Under tolerance		Temperature/Cure			
Cracks		Broken/Damaged		Inspection Incomplete		Part Incorrect		Weld			
Crushed/Crimped.		Burrs		Instructions Incomplete/Unclear		Part Lost/Missing		Wrong Stock Pulled			
Cuffs		Contamination		Maintenance		Part Moved					
Heat Treat		Countersink		Mislabeled		Positioned Wrong					
Inspection Strip in Tube		Cut Too Short		Misread		Power Loss/Surge					
Ripples in Bend		Drill Holes		Offset							
Torque Waves in Extrusion		Drawing		Out of Calibration							
Turning Sequence		Finish		Out of Sequence							
Wave/Twist in Tube		Folio		Outside Dimensions							

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework Scrap Use-as-is Work Order Update	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other				
Part No. _____											
NCR No. _____											
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear				General							
Bending	General			Bend	General			Grain	Ovalized	Pressure/Forced	
Centre Not Concentric to O/S				BOM/Route				Hardware	Over/Under tolerance	Temperature/Cure	
Cracks				Broken/Damaged				Inspection Incomplete	Part Incorrect	Weld	
Crushed/Crimped				Burrs				Instructions Incomplete/Unclear	Part Lost/Missing	Wrong Stock Pulled	
Cuffs				Contamination				Maintenance	Part Moved		
Heat Treat				Countersink				Mislabeled	Positioned Wrong		
Inspection Strip in Tube				Cut Too Short				Misread	Power Loss/Surge		
Ripples in Bend				Drill Holes				Offset			
Torque Waves in Extrusion				Drawing				Out of Calibration			
Turning Sequence				Finish				Out of Sequence			
Wave/Twist in Tube				Folio				Outside Dimensions			

Work Order ID 89698

89698

Page 5

Wednesday, September 05, 2012 8:55:24 AM

Item ID: 647.0114

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Clip

Stop

NS2

Start Date: 8/30/2012 **Start Qty:** 20.00

20

Cust Item ID:

Required Date: 9/28/2012 **Req'd Qty:** 20.00

20

Customer:

Reference:

Approvals:	Process Plan: _____	Date: _____	Tooling: _____	Date: _____	Run	Start	*NR1*
	QC: _____	Date: _____	SPC (Y/N): _____	Date: _____	Stop		*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220 *220* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00							

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-COMPLIANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>				
Part No. _____											
NCR No. _____											
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio		<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions		<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled	
										<input type="checkbox"/> Other	

Picklist Print

Page 1

Wednesday, September 05, 2012 8:55:29 AM

Work Order ID: 89698

89698
647 0114

Parent Item: 647.0114

Parent Item Name: Clip

Start Date: 8/30/2012

Required Date: 9/28/2012

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP REV:A 12.08.14 NEW ISSUE DD VERF:JFS

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.063 *M2024T3S.063* 2024-T3 .063 sheet		Purchased	No			110	sf	136.5200	0.0556	1.170526 ** 1.2			7m 12-9-16

Location	Loc Qty	Loc Code
MAT022	136.52	
119916	67.1	
121197	69.42	121197

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS						
			Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
			Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
			Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
			Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Other		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled	

DART AEROSPACE LTD	Work Order:	89698
Description: C11P	Part Number:	647014
Inspection Dwg: 647010 Rev:		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

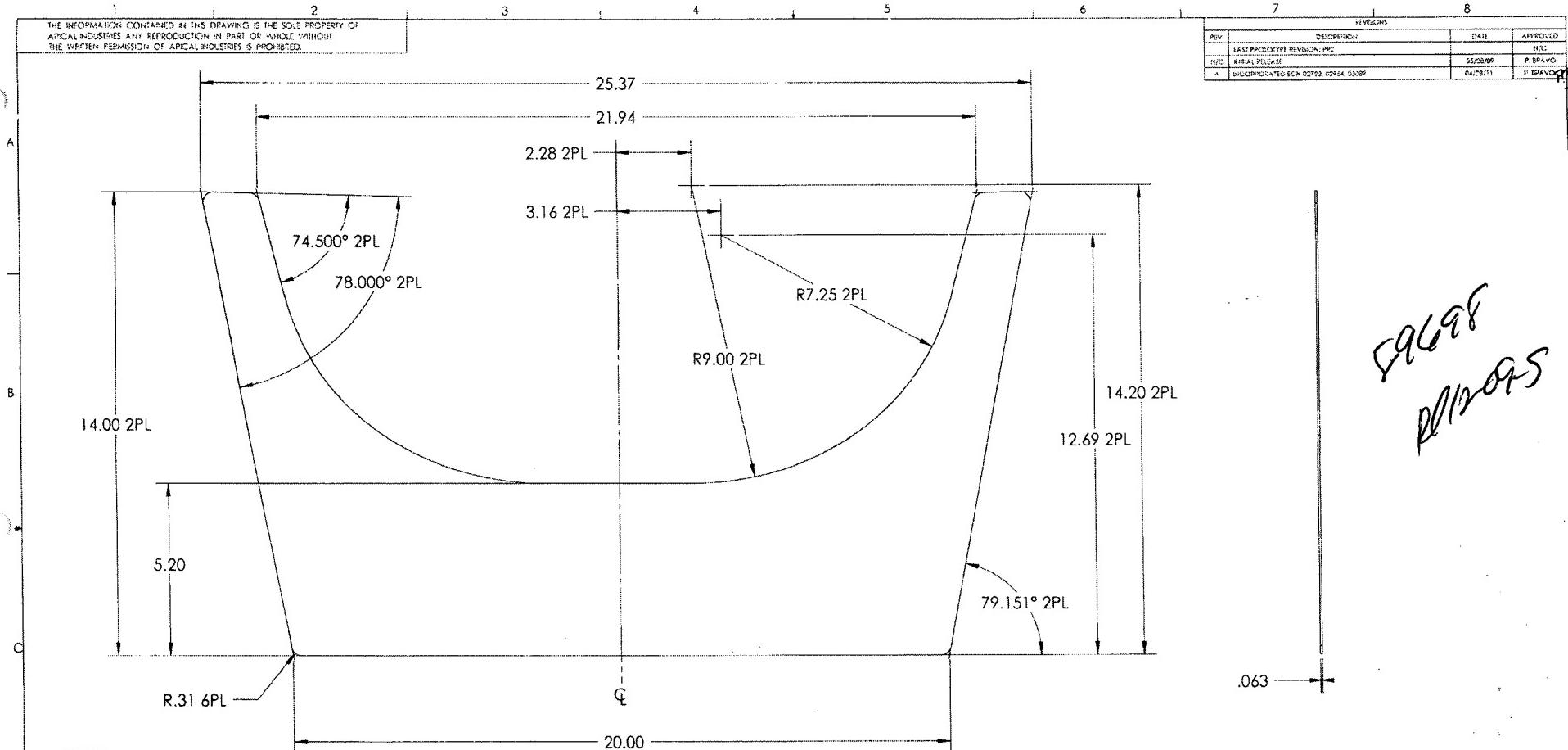
Measured by:	Jm	Audited by:	SMB	Preliminary Approval:	
Date:	12-9-16	Date:	12-9-17	Date:	

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15

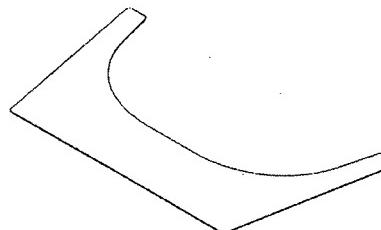
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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
L	LAST PROTOTYPE REVISION, PZ		NIC
N/C	INITIAL RELEASE	05/28/09	P. BRAVO
A	INCORPORATED ECN 02722 UPR-4A, 03089	04/28/11	P. BRAVO



NOTES:

- 1 MATERIAL:** ALUMINUM 2024-T3 PER AMS-QQ-A-250/4.
 - 2 FINISH:** HARD ANODIZE IAW MIL-A-8625 TYPE III,
CLASS 2, COLOR BLACK;
PRETREAT PR-148 ADHESION PROMOTER;
PRIME IAW MIL-P-23377J TYPE I CLASS N.
 - 3. DEBURR AND BREAK ALL SHARP EDGES.
 - 4. IDENTIFY IAW MPP-120.
 - 5 MATERIAL:** 304 SS IAW AMS 5643.
 - 6 FINISH:** PRIME IAW MIL-P-23377J TYPE I CLASS N.



647.0110

			647.0116	DOUBLER	<input type="checkbox"/>	<input type="checkbox"/>
			647.0115	CLIP	<input type="checkbox"/>	<input type="checkbox"/>
			647.0114	CLIP	<input type="checkbox"/>	<input type="checkbox"/>
			647.0113	STRUT DOUBLER	<input type="checkbox"/>	<input type="checkbox"/>
			647.0112	STRUT BRACKET	<input type="checkbox"/>	<input type="checkbox"/>
			647.0111	PANEL	<input type="checkbox"/>	<input type="checkbox"/>
			647.0110	ROOF DOUBLER	<input type="checkbox"/>	<input type="checkbox"/>
FIND #			PART #	DESCRIPTION	MATL.	SPEC.
QTY	PARTS LIST					
NEXT ASSY (S)	ORIGINAL DATE 05-28-09 REVISED BY P. BRAVS	CHIEF CTR. P. BRAVS	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300			
646.9500	25-242 CONTRACT NO:					SHEETMETAL
UNLESS OTHERWISE SPECIFIED: 1. ALL NUCLEAR ARE IN INCHES 2. STANDARD DECIMALS 4 D.P. 3. PLACE DECIMALS 1 D.P. 4. ANGLES IN DEGREES 5. RADII ARE IN INCHES			SITE	CAGE CODE	DRWGS. P-7	PEV
			B	D7M26	647.0100	A
			SCALE	INCHES	SHEET 1 OF 6	

NCR: Yes / No

DQA: _____ Date: _____

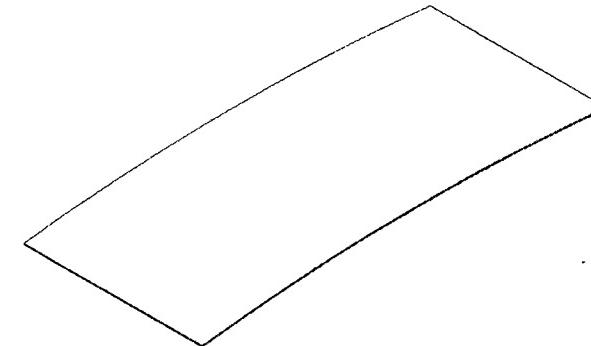
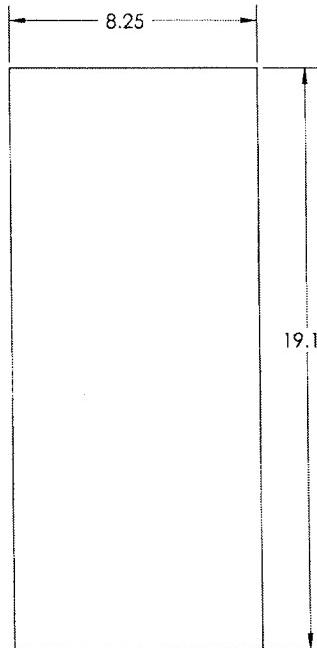
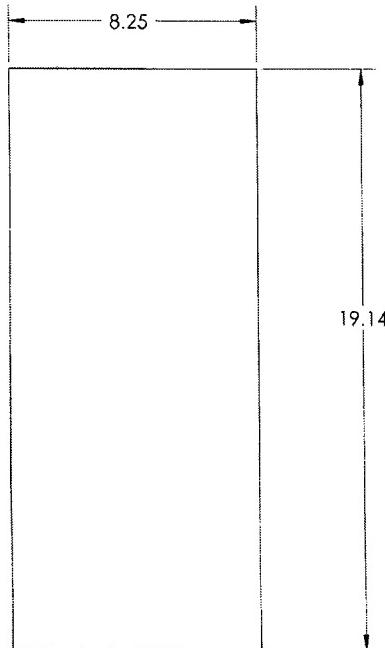
WORK ORDER NON-COMPLIANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework Scrap Use-as-is Work Order Update	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other				
Part No. _____											
NCR No. _____											
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear				General							
Bending	General			Bend	Grain			Ovalized	Pressure/Forced		
Centre Not Concentric to O/S				BOM/Route	Hardware			Over/Under tolerance	Temperature/Cure		
Cracks				Broken/Damaged	Inspection Incomplete			Part Incorrect	Weld		
Crushed/Crimped.				Burrs	Instructions Incomplete/Unclear			Part Lost/Missing	Wrong Stock Pulled		
Cuffs				Contamination	Maintenance			Part Moved			
Heat Treat				Countersink	Mislabeled			Positioned Wrong			
Inspection Strip in Tube				Cut Too Short	Misread			Power Loss/Surge			
Ripples in Bend				Drill Holes	Offset						
Torque Waves in Extrusion				Drawing	Out of Calibration						
Turning Sequence				Finish	Out of Sequence						
Wave/Twist in Tube				Folio	Outside Dimensions						

1 2 3 4 5 6 7 8

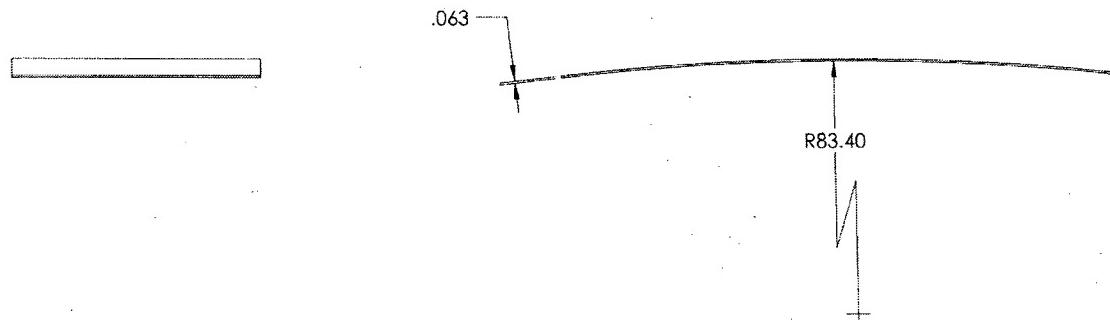
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647.0111

896A8

FLAT PATTERN



ORIGINAL DATE 04-04-1998	CREATED BY P. BRAVO
RE-POSTED NO.	0
DRAWING APPROVAL P. BRAVO	
CONTRACT NR.	
APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
SHEETMETAL	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DEPARTMENTS 1 PLATE THICKNESS ± .01 3 PLATE CORNERS ± .005 APRIL 1998	
REV B 07M6	SCALE: NONINF 647.0100 SHEET 2 OF 6

NCR: Yes / No

DQA: _____ Date: _____

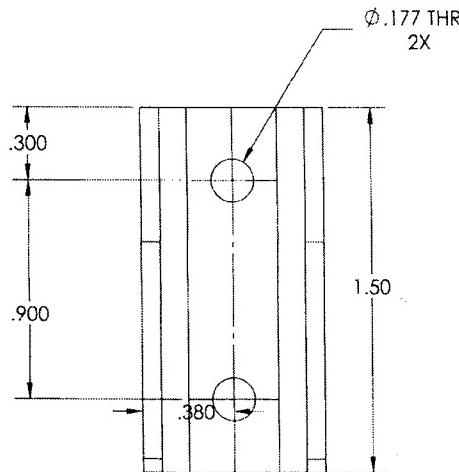
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

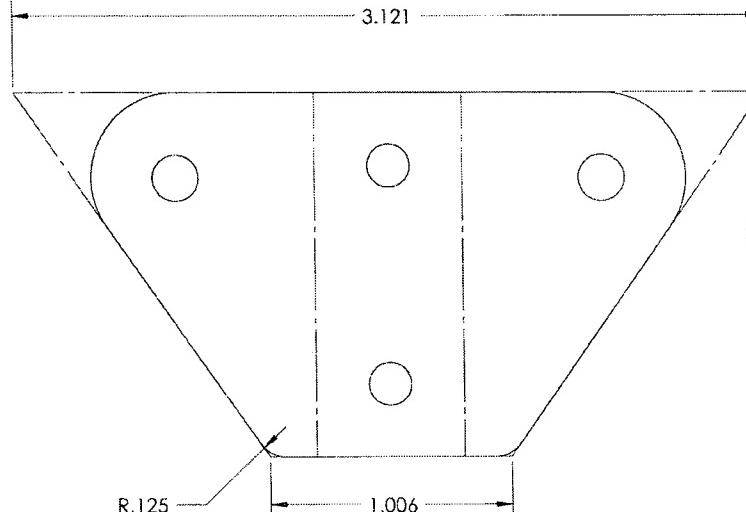
Work Order: _____		DISPOSITION		AGAINST DEPARTMENT/PROCESS						
Part No. _____		Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
NCR No. _____		Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
		Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
		Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Doc/Data										
Equip/Tooling										
Operator										
Material										
Setup										
Other										
Process										
Supplier										
Training										
Unapproved										
FAULT CATEGORY										
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Other		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled

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REV	DESCRIPTION	DATE	APPROVED

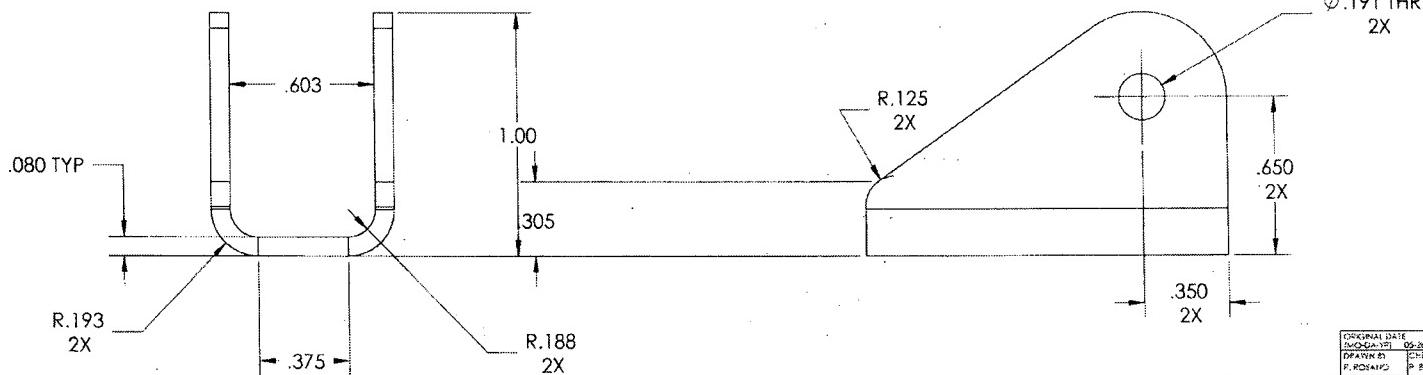


FLAT PATTERN



647.0112

89698



ORIGINAL DATE 05-29-95	REVISION 0	CHECKER P. BRAVO
DRAWN BY F. ROMAÑO	DESIGNED BY H. BRAVO	APPROVAL DRAFTED BY CONTRACTOR
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES. TOLERANCES ARE 2 MIL INCHES. DEGREES ARE 3 MIL DEGREES. ANGLES ARE 1 MIL ANGLES.		
SCALE: NONE	DATE: 05-29-95	REV: A
ITEM: CAGE CODE: B - U7M26		DOC. NO: 647.0100
SHEET: 3 OF 6		

APICAL INDUSTRIES

2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

SHEETMETAL

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

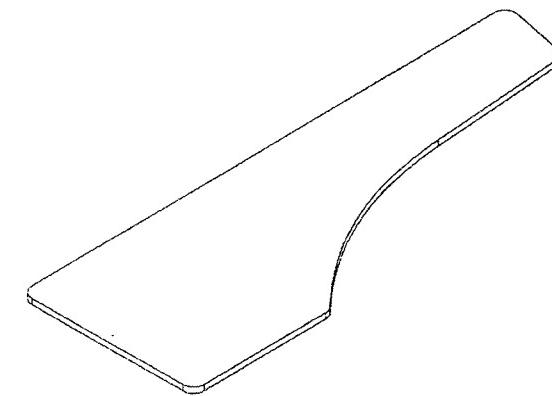
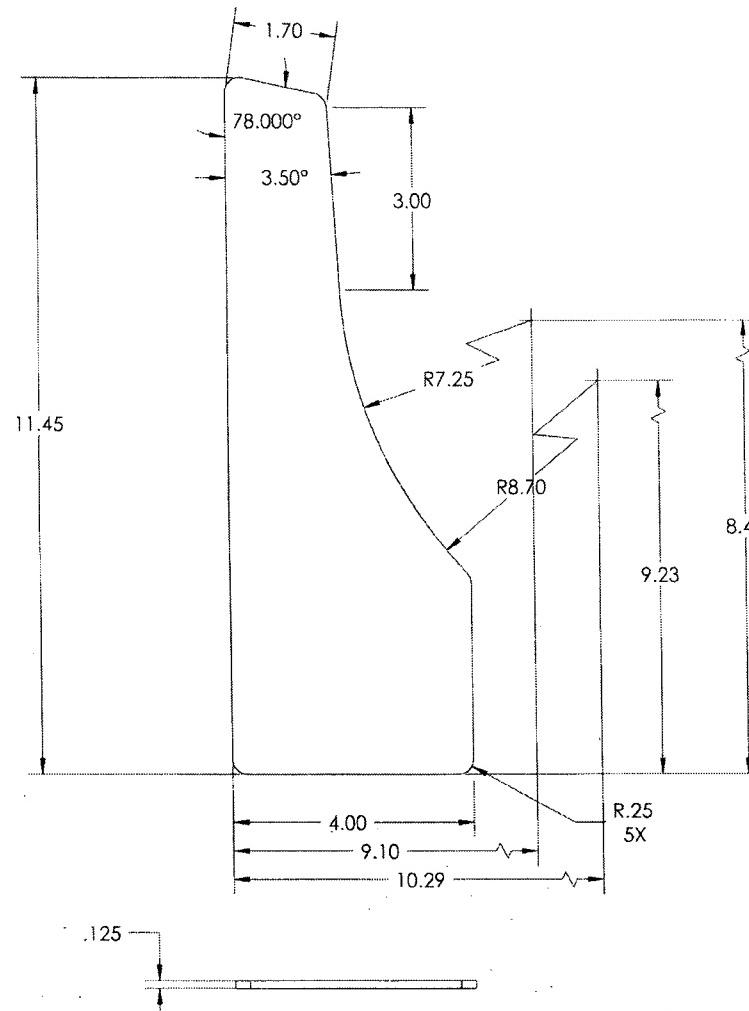
QA Closed: _____ Date: _____

Work Order: _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS					
				Rework Scrap Use-as-is Work Order Update	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other			
Part No. _____											
NCR No. _____											
Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear				General							
Bending		Bend		Grain		Ovalized		Pressure/Forced			
Centre Not Concentric to O/S		BOM/Route		Hardware		Over/Under tolerance		Temperature/Cure			
Cracks		Broken/Damaged		Inspection Incomplete		Part Incorrect		Weld			
Crushed/Crimped.		Burrs		Instructions Incomplete/Unclear		Part Lost/Missing		Wrong Stock Pulled			
Cuffs		Contamination		Maintenance		Part Moved					
Heat Treat		Countersink		Mislabeled		Positioned Wrong					
Inspection Strip in Tube		Cut Too Short		Misread		Power Loss/Surge					
Ripples in Bend		Drill Holes		Offset							
Torque Waves in Extrusion		Drawing		Out of Calibration							
Turning Sequence		Finish		Out of Sequence							
Wave/Twist in Tube		Folio		Outside Dimensions							

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REV.	REVISION	DESCRIPTION	DATE	APPROVED



gg6a

ORIGINAL DATE 05-26-07	REVISION A	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300
DRAWN BY P. ROSARIO	CHECKED P. BRAVO	SHEETMETAL
DRAWING APPROVAL P. BRAVO DRAFTS CONTRACTS		
UNLESS OTHERWISE SPECIFIED SHALL BE IN ACCORDANCE WITH: TOLERANCES AS PER STASCH DRAWING 161 2 PC'S DUE MAY 12, 2007 AMOUNTS ± .5"		
REV. B 07M16	DWG. NO. 647.010J	REV. A
SCALE: NONE SHEET 4 OF 6		

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

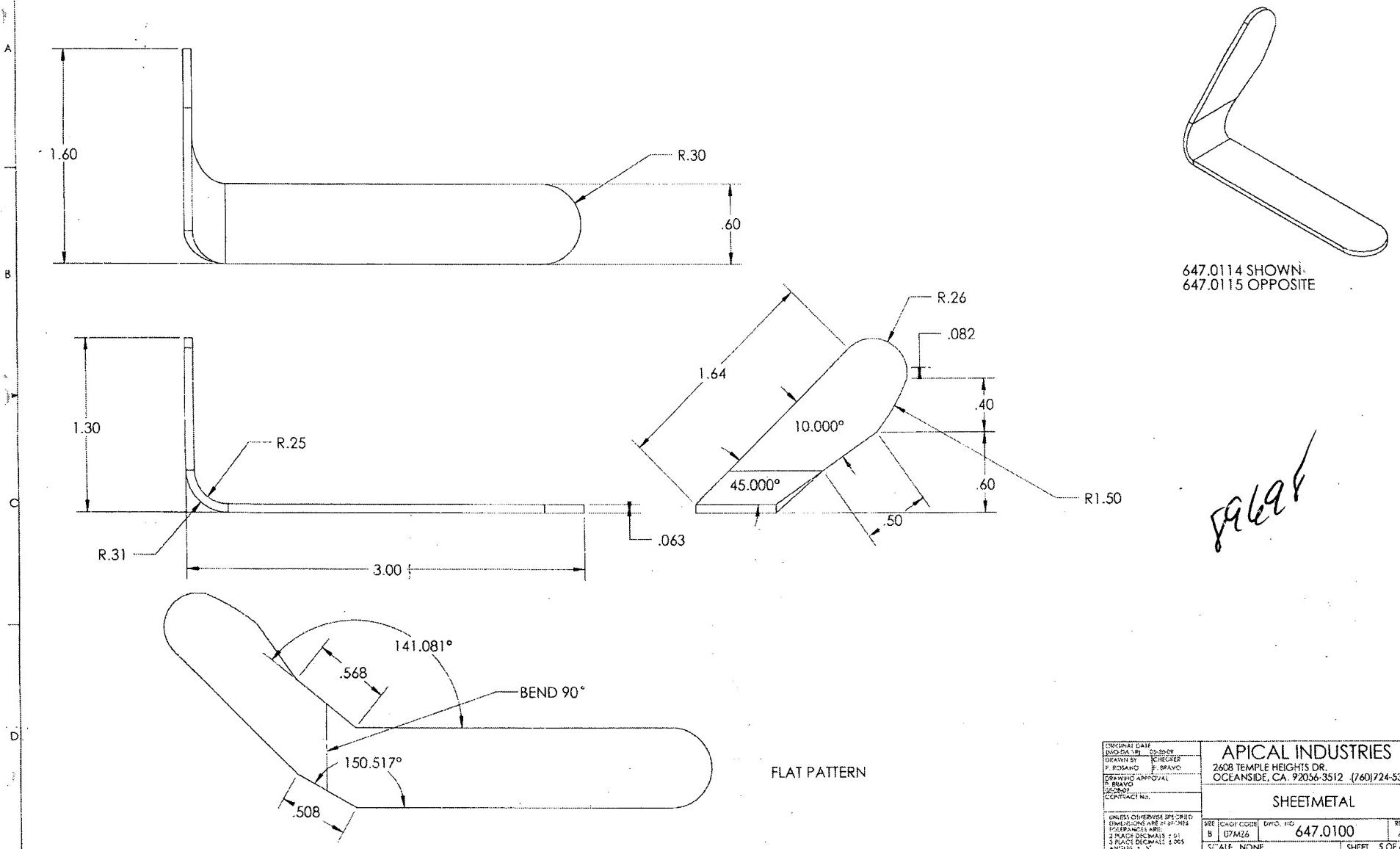
QA Closed: _____ Date: _____

Work Order: _____		DISPOSITION			AGAINST DEPARTMENT/PROCESS						
Part No. _____		Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>					
NCR No. _____		Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>					
		Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>					
		Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>						
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled	
										<input type="checkbox"/> Other	

1 2 3 4 5 6 7 8

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REV.	DATE	DESCRIPTION	DRAWN BY	APPROVED



DRAWN BY	P. ROSARIO	E. BRAVO
DRAWING APPROVAL	BRAVO	CONTRACT NO.
UNLESS OTHERWISE SPECIFIED: TOLERANCES ARE: 1/8 INCHES UNLESS INDICATED OTHERWISE ANGLES ± 5°	REV. C	DATE 07/26/02
SCALE NONE	647.0100	REV. A
APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300		
SHEETMETAL		
B 07/26		
SHEET 5 OF 6		

NCR: Yes / No

DQA: Date: .

WORK ORDER NON-CONFORMANCE / UPDATE

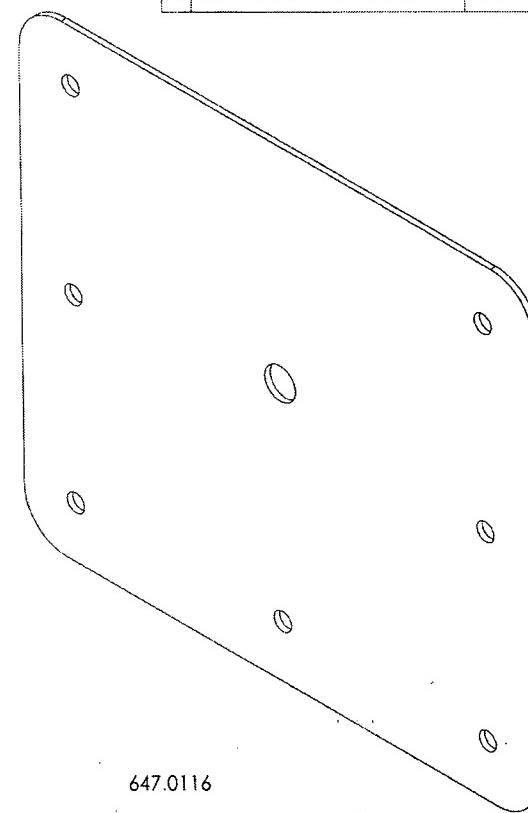
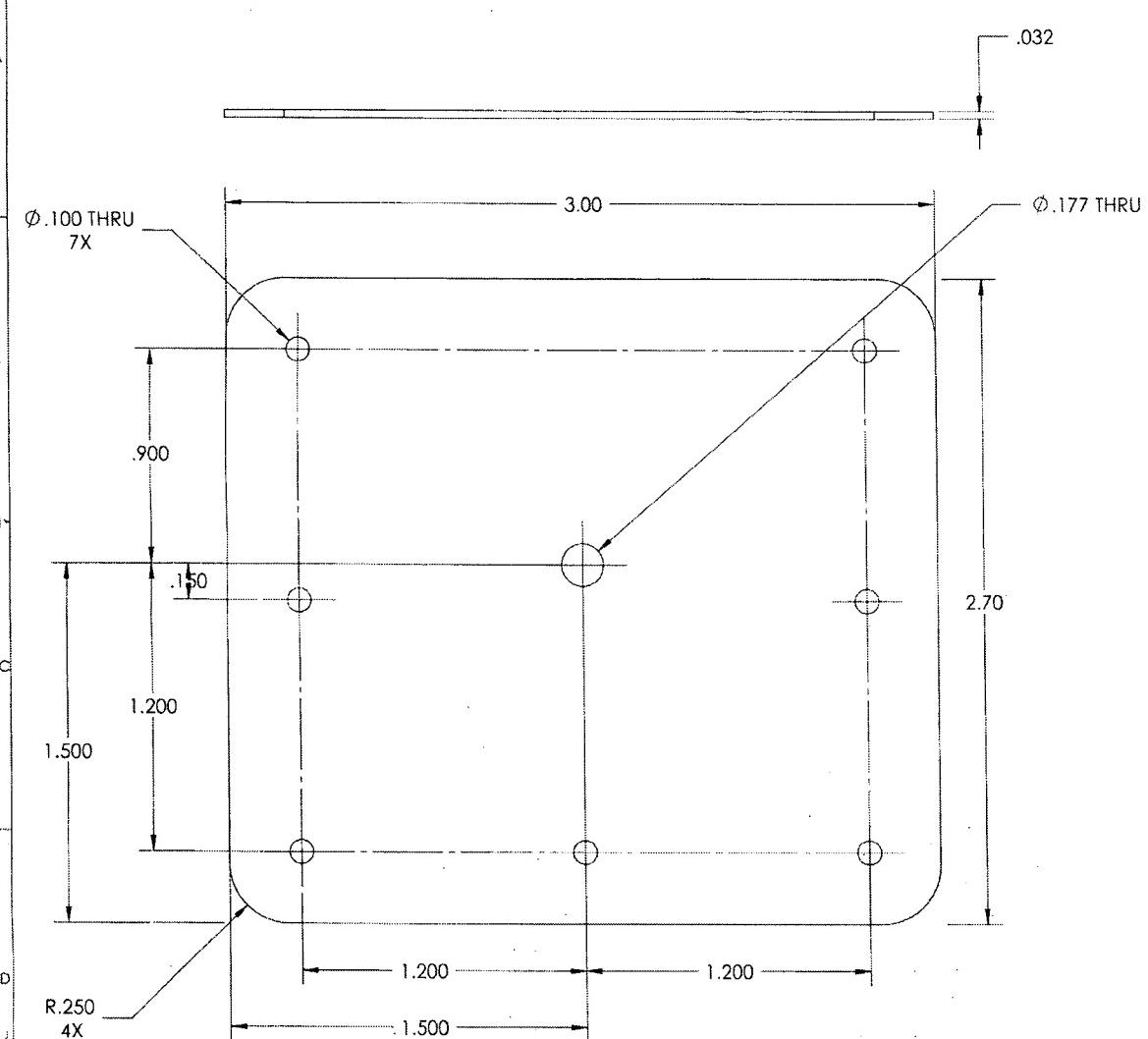
QA Closed: _____ Date: _____

Date:

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>				
Part No. _____											
NCR No. _____											
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear				General							
Bending	General			Bend	Grain			Ovalized	Pressure/Forced		
Centre Not Concentric to O/S				BOM/Route	Hardware			Over/Under tolerance	Temperature/Cure		
Cracks				Broken/Damaged	Inspection Incomplete			Part Incorrect	Weld		
Crushed/Crimped.				Burrs	Instructions Incomplete/Unclear			Part Lost/Missing	Wrong Stock Pulled		
Cuffs				Contamination	Maintenance			Part Moved			
Heat Treat				Countersink	Mislabeled			Positioned Wrong			
Inspection Strip in Tube				Cut Too Short	Misread			Power Loss/Surge			
Ripples in Bend				Drill Holes	Offset						
Torque Waves in Extrusion				Drawing	Out of Calibration						
Turning Sequence				Finish	Out of Sequence						
Wave/Twist in Tube				Folio	Outside Dimensions						

1 2
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REVISIONS		DESCRIPTION	DATE	APPROVED



647.0116

89098

DRAWN BY: P. BRAVO	CHECKED: P. BRAVO
DESIGNED BY: P. BRAVO	APPROVED: P. BRAVO
DRAWING APPROVAL: P. BRAVO	
P. BRAVO	
DATE: 05-28-02	
CONTRACT NO:	
SHEETMETAL	
APICAL INDUSTRIES	
2508 TEMPLE HEIGHTS DR.	
OCEANSIDE, CA. 92056-3512 (760)724-5300	
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1 PLACES DECIMALS #1 2 PLACES DECIMALS #2 3 PLACES DECIMALS #3 ANGLES ± 1°	REF. CAGE CODE: B DWG. NO: 647.0100 SCALE: NONE
	REV. A
	1 SHEET 6 OF 6

NCR: Yes / No

DQA: Date:

WORK ORDER NON-COMPLIANCE / UPDATE

QA Closed: _____ Date: _____

Date:

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework Scrap Use-as-is Work Order Update	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other				
Part No. _____											
NCR No. _____											
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear	General										
	Bending	Bend	Grain	Ovalized	Pressure/Forced						
	Centre Not Concentric to O/S	BOM/Route	Hardware	Over/Under tolerance	Temperature/Cure						
	Cracks	Broken/Damaged	Inspection Incomplete	Part Incorrect	Weld						
	Crushed/Crimped.	Burrs	Instructions Incomplete/Unclear	Part Lost/Missing	Wrong Stock Pulled						
	Cuffs	Contamination	Maintenance	Part Moved							
	Heat Treat	Countersink	Mislabeled	Positioned Wrong							
	Inspection Strip in Tube	Cut Too Short	Misread	Power Loss/Surge							
	Ripples in Bend	Drill Holes	Offset								
	Torque Waves in Extrusion	Drawing	Out of Calibration								
	Turning Sequence	Finish	Out of Sequence								
	Wave/Twist in Tube	Folio	Outside Dimensions								